

## Creation Process and Specialty of Volcanic Caves in Jeju

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### 1. Creation Process of Volcanic Caves

A volcanic cave, or a lava cave is a continuity of gas cavities created by underground magma gushed out the earth's surface. Lava means a molten rock that reaches the earth's surface through volcanoes or fissures.

When magma gushes out, its temperature is more than 1,200~1,500°C. But it is gradually cooled and consolidated and then becomes a rock. When enumerating from a rock with the small content of silicon dioxide, it can be enumerated by basaltic lava, andesitic lava, and dacite lava, and rhyolite lava.

Basaltic lava among them has high fluidity and generally its effusion temperature is high and so it flows down along the ground's slope. At this time, a

lava flow with high temperature contains much gas. Thereby gas cavities are created and connected and result in forming a so-called lava cave.

Namely, a lava flow with fluidity flows down along the low slope. Therefore, the bottom of the lava flow gets downed and sunk. After all, the landform of a lava shelf is formed in the internal wall of the volcanic cave.

As mentioned above, the creation process of volcanic caves needs to be in detail investigated for the shape of lava shelves, lava bridges, and lava stalactites, the drop point of lava balls, and striations on the cave's wall which represent the fluidity of gas, etc.

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## 2. Specialties of Volcanic Caves

The creation process of volcanic caves in Jeju-dong may be same to that of common volcanic caves. However, they are a case that a large quantity of lava flows with high fluidity was gushed on the gentle slope. So it is thought that a large-scale cave could be created inside these lava flows.

Also, thanks to a large-scale lava flow, massive creatures are developed from cave sediments and creatures and landforms in this cave.

Unlike lime caves, volcanic caves are formed only when volcanoes are active. Once lava flows are cooled, many landforms and things including lava stalactites and lava stalagmites stop growing. From this time, the cave goes into the collapse period. Once cave sediments are damaged, they cannot be recovered at all.

Therefore, the environmental preservation must be seriously considered.